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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

ALAJEM, SARA ET AL

Serial No: 09/727,480

Filed: 12 April, 2000

For: OLIGONUCLEOTIDES AND ASSEMBLIES THEREOF USEFUL IN THE DETECTION OF THE PRESENCE OR ABSENCE OF TARGET NUCLEIC ACID SEQUENCES IN A SAMPLE

§

Group Art Unit: 1655

Attorney Docket: 00/21400

Examiner: Jeffrey Norman Fredman

Commissioner of Patents and Trademarks
Washington, D.C. 20231
Box AG

RESPONSE AFTER FINAL REJECTION

Sir:

This is in response to the United States Patent and Trademark Office Action mailed July 23, 2002, which response is being made on or before January 23, 2003, for which a three-months extension fee is due and is being submitted herewith. Please amend the above-identified application as follows:

In the claims:

Please amend claim 87 without prejudice as follows:

87. (Amended) A method of detecting a presence or an absence of a target nucleic acid sequence in a sample, the method comprising the steps of:

(a) contacting the sample with an oligonucleotide system under hybridization conditions so as to form a reaction mixture, said

oligonucleotide system including an anchor oligonucleotide and an amplifier oligonucleotide, each of said anchor and said amplifier oligonucleotides including a first region complementary with the target nucleic acid sequence, each of said anchor and said amplifier oligonucleotides further including a second region, said second regions of said anchor and said amplifier oligonucleotides being at least partially complementary and thus capable of forming a duplex structure including a nucleic acid cleaving agent recognition sequence following hybridization of said first regions of said anchor and said amplifier oligonucleotides with the target nucleic acid sequence, said anchor and said amplifier oligonucleotides are selected such that when hybridized with the target nucleic acid sequence in a presence of a nucleic acid cleaving agent recognizing said nucleic acid cleaving agent recognition sequence, only said amplifier oligonucleotide is cleavable by said nucleic acid cleaving agent, wherein cleavage of said amplifier oligonucleotide leads to dissociation of said amplifier oligonucleotide from the target nucleic acid sequence while said anchor oligonucleotide remains hybridized to the target nucleic acid sequence to form a stabilized anchor oligonucleotide-target nucleic acid sequence hybrid thereby allowing a second and uncleaved amplifier oligonucleotide to hybridize with said anchor oligonucleotide-target nucleic acid sequence hybrid thus enabling recycling of said anchor oligonucleotide-target nucleic acid sequence hybrid with respect to said amplifier oligonucleotide.

(b) adding said nucleic acid cleaving agent to said reaction mixture under predetermined reaction conditions, such that, if the target nucleic acid sequence is present in the sample, said nucleic acid